## Claims

1. A multireactive polymerizable mesogenic compound of formula I

$R^1$-MG-$R^2$ I

wherein

$R^1$ is halogen, CN, OCN, NCS, $NO_2$ or a chiral or achiral alkyl radical with 1 to 30 C atoms which may be unsubstituted, mono- or poly-substituted by halogen or CN, optionally one or more non-adjacent $CH_2$ groups being replaced, in each case independently from one another, by -O-, -S-, -NH-, -N($CH_3$)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another, or alternatively has one of the meanings of $R^2$ or is P-(Sp-X)$_n$-,

P is a polymerizable group,

Sp is a spacer group with 1 to 25 C atoms,

X is -O-, -S-, -CO-, -COO-, -OCO-, -OCO-O-, -CO-NH-, -NH-CO-, -$OCH_2$-, -$CH_2O$-, -$SCH_2$-, -$CH_2S$-, -CH=CH-COO-, -OOC-CH=CH- or a single bond,

n is 0 or 1,

MG is a mesogenic group, and

$R^2$ is straight-chain or branched alkyl with 1 to 25 C atoms which may be unsubstituted, mono- or poly-substituted by halogen or CN, optionally one or more non-adjacent $CH_2$ groups being replaced, in each case independently from one another, by -O-, -S-, -NH-, -N($CH_3$)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in

such a manner that oxygen atoms are not linked directly to one another, and which is substituted with at least two identical or different groups P.

2. A multireactive polymerizable mesogenic compound according to claim 1, wherein $R^1$ is a non-polymerizable group.

3. A multireactive polymerizable mesogenic compound according to claim 1, wherein $R^1$ has one of the meanings of $R^2$.

4. A multireactive polymerizable mesogenic compound according to claim 1, wherein MG is of formula II

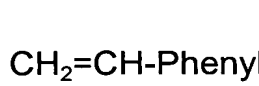
$$-(A^1\text{-}Z)_m\text{-}A^2- \qquad \text{II}$$

wherein

Z is -O-, -S-, -CO-, -COO-, -OCO-, -CO-NH-, -NH-CO-, $-CH_2CH_2-$, $-OCH_2-$, $-CH_2O-$, $-SCH_2-$, $-CH_2S-$, -CH=CH-, -CH=CH-COO-, -OCO-CH=CH-, -C≡C- or a single bond,

$A^1$ and $A^2$ are each independently 1,4-phenylene in which, in addition, one or more CH groups are optionally replaced by N; 1,4-cyclohexylene in which, in addition, one or two non-adjacent $CH_2$ groups are optionally replaced by O and/or S; 1,4-cyclohexenylene; 1,4-bicyclo(2,2,2)octylene; piperidine-1,4-diyl; naphthalene-2,6-diyl; decahydronaphthalene-2,6-diyl; or 1,2,3,4-tetrahydro-naphthalene-2,6-diyl; all these groups optionally being unsubstituted, mono- or poly-substituted with F,Cl, OH, CN, $NO_2$ or alkyl, alkoxy, alkylcarbonyl or alkoxycarbonyl groups having 1 to 7 C atoms wherein one or more H atoms may be substituted by F or Cl, and

m is 1, 2 or 3.

5. A multireactive polymerizable mesogenic compound according to claim 1, wherein P is selected from $CH_2$=CW-COO-, WCH=CH-O-, $CH_2$=CH-Phenyl-$(O)_k$- and  , with W being H, $CH_3$ or Cl and k being 0 or 1.

6. A multireactive polymerizable mesogenic compound according to claim 1, wherein $R^2$ is substituted with 2, 3, 4 or 5 identical or different polymerizable groups P.

7. A multireactive polymerizable mesogenic compound according to claim 1, wherein $R^2$ is a group of one of the following formulae

-X-alkyl-$CHP^1$-$CH_2$-$CH_2P^2$ Ia

-X-alkyl-$C(CH_2P^1)(CH_2P^2)$-$CH_2P^3$ Ib

-X-alkyl-$CHP^1CHP^2$-$CH_2P^3$ Ic

-X-alkyl-$C(CH_2P^1)(CH_2P^2)$-$C_aH_{2a+1}$ Id

-X-alkyl-$CHP^1$-$CH_2P^2$ Ie

-X-alkyl-$CHP^1P^2$ If

-X-alkyl-$CP^1P^2$-$C_aH_{2a+1}$ Ig

-X-alkyl-$C(CH_2P^1)(CH_2P^2)$-$CH_2OCH_2$-$C(CH_2P^3)(CH_2P^4)CH_2P^5$ Ih

-X-alkyl-$CH((CH_2)_aP^1)((CH_2)_bP^2)$ Ii

-X-alkyl-$CHP^1CHP^2$-$C_aH_{2a+1}$ Ik

wherein

alkyl is straight-chain or branched alkylene with 0 to 12 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, it being also possible for one or more non-adjacent $CH_2$ groups to be replaced, in each case independently from one another, by -O-, -S-, -NH-, -N($CH_3$)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another,

a and b are identical or different integers from 0 to 6,

X has one of the meanings of formula I, and

$P^1$ to $P^5$ independently have one of the meanings of P.

8. A multireactive polymerizable mesogenic compound according to claim 5, wherein $R^2$ is a group of one of the following formulae

-X-alkyl-$CHP^1$-$CH_2$-$CH_2P^2$ Ia

-X-alkyl-$C(CH_2P^1)(CH_2P^2)$-$CH_2P^3$ Ib

-X-alkyl-$CHP^1CHP^2$-$CH_2P^3$ Ic

-X-alkyl-$C(CH_2P^1)(CH_2P^2)$-$C_aH_{2a+1}$ Id

-X-alkyl-$CHP^1$-$CH_2P^2$ Ie

-X-alkyl-$CHP^1P^2$ If

-X-alkyl-$CP^1P^2$-$C_aH_{2a+1}$ Ig

-X-alkyl-$C(CH_2P^1)(CH_2P^2)$-$CH_2OCH_2$-$C(CH_2P^3)(CH_2P^4)CH_2P^5$ Ih

$-X\text{-alkyl-}CH((CH_2)_aP^1)((CH_2)_bP^2)$ Ii

$-X\text{-alkyl-}CHP^1CHP^2\text{-}C_aH_{2a+1}$ Ik

wherein

alkyl is straight-chain or branched alkylene with 0 to 12 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, it being also possible for one or more non-adjacent $CH_2$ groups to be replaced, in each case independently from one another, by -O-, -S-, -NH-, $-N(CH_3)-$, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another,

a and b are identical or different integers from 0 to 6,

X has one of the meanings of formula I, and

$P^1$ to $P^5$ independently have one of the meanings of P.

9. A multireactive polymerizable mesogenic compound according to claim 1, wherein alkyl is $-(CH_2)_c-$, with c being an integer from 0 to 12.

10. A multireactive polymerizable mesogenic compound according to claim 1, wherein each P is independently of each other acrylate, methacrylate, vinyl, vinyloxy, epoxy or p-vinylphenyloxy.

11. A polymerizable mesogenic composition comprising at least two components, wherein at least one component is a compound according to claim 1.

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12. A linear or crosslinked polymer obtained by polymerizing a polymerizable mesogenic compound according to claim 1.

13. A linear or crosslinked polymer obtained by polymerizing a polymerizable mesogenic compound according to claim 11.

14. A polarizer, optical retardation or compensation film, alignment layer, colour filter, holographic element, liquid crystal display, PDLC, polymer gel, polymer stabilized cholesteric texture (PSCT) display, adhesive, synthetic resin with anisotropic mechanical properties, cosmetic, diagnostic, liquid crystal pigment for decorative and/or security applications, or article for nonlinear optics or optical information storage comprising a compound according to claim 1.

15. A polarizer, optical retardation or compensation film, alignment layer, colour filter, holographic element, liquid crystal display, PDLC, polymer gel, polymer stabilized cholesteric texture (PSCT) display, adhesive, synthetic resin with anisotropic mechanical properties, cosmetic, diagnostic, liquid crystal pigment for decorative and/or security applications, or article for nonlinear optics or optical information storage comprising a composition according to claim 11.

16. A polarizer, optical retardation or compensation film, alignment layer, colour filter, holographic element, liquid crystal display, PDLC, polymer gel, polymer stabilized cholesteric texture (PSCT) display, adhesive, synthetic resin with anisotropic mechanical properties, cosmetic, diagnostic, liquid crystal pigment for decorative and/or security applications, or article for nonlinear optics or optical information storage comprising a polymer according to claim 12.